

DOCUMENT RESUME

ED 171 977

CE 021 703

AUTHOR Gottfredson, Linda S.
TITLE Aspiration-Job Match: Age Trends in a Large
Nationally-Representative Sample of Young White
Men.
INSTITUTION Johns Hopkins Univ., Baltimore, Md. Center for the
Study of Social Organization of Schools.
SPONS AGENCY National Inst. of Education (DHEW), Washington,
D.C.
REPORT NO JHU-CSSOS-268
PUB DATE Dec 78
GRANT NIE-G-76-0075
NOTE 30p.
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Age Differences; Career Change; *Career Development;
Caucasians; Change Strategies; *Changing Attitudes;
*Congruence; Employment Potential; Job Development;
Job Enrichment; *Job Satisfaction; Males; National
Surveys; *Occupational Aspiration; Occupational
Surveys; Promotion (Occupational); Self
Actualization; Self Concept; Trend Analysis;
Vocational Adjustment; *Vocational Counseling
IDENTIFIERS Hollands Occupational Typology

ABSTRACT

In order to learn how people may alter or reconcile their aspirations and jobs during their career development, this study examined the match between vocational aspirations and actual jobs of white young men and older men. Age trends in the match between vocational aspirations and actual jobs were studied in a nationally representative sample of 3,730 white men aged sixteen to twenty-eight who were interviewed yearly over a five-year period. Findings indicate that as the youth aged, higher agreement between jobs and aspirations (classified according to Holland's typology) occurred. In addition, the distributions of both aspirations and actual jobs differed with age. Larger proportions of the older men were engaged in enterprising work, and the distribution of aspirations, which at age sixteen diverged markedly from the distribution of jobs, resembled that distribution more closely by age twenty-eight. (Implications for changing strategies of vocational counseling and research are included.) (Author/LRA)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED171977 . . .

ASPIRATION-JOB MATCH: AGE TRENDS IN A LARGE
NATIONALLY-REPRESENTATIVE SAMPLE OF YOUNG WHITE MEN

Grant No. NIE-G-76-0075

Linda S. Gottfredson

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN-
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT
OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

Report No. 268

December, 1978

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

J. Hollifield

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Published by the Center for Social Organization of Schools, supported
in part as a research and development center by funds from the United
States National Institute of Education, Department of Health, Education
and Welfare. The opinions expressed in this publication do not
necessarily reflect the position or policy of the National Institute of
Education, and no official endorsement by the Institute should be
inferred.

The Johns Hopkins University

Baltimore, Maryland

STAFF

Edward L. McDill, Co-director

James M. McPartland, Co-director

Karl L. Alexander

Barbara Bucksoil

Henry Jay Becker

Nancy L. Kewit

Jomills E. Braddock, II

Hazel G. Kennedy

Vicky C. Brown

Marshall Leavey

Ruth H. Carr

James W. McKenzie

Martha A. Cook

Ann Miller

Denise Cook

James W. Richards, Jr.

Doris E. Brown

Suzanne L. Hicklen

Joyce L. Brown

Margaret Ann Ricks

James J. Brown

Benjamin L. Roberts

Joel P. Campbell

Richard R. Scott

Gary D. Campbell

Robert E. Slavin

Linda S. Campbell

Carol L. Steurer

Larry J. Campbell

Mary K. Swatko

Stephen Campbell

Charles B. Thomas

Bruce R. Hare

Gail E. Thomas

Edward J. Harsch

Hazel Thomas

John H. Holmes

Carol A. Weinreich

Lawrence F. Howe

Michael D. Wiatrowski

Introduction Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school processes and organization.

The Center works through four programs to achieve its objectives. The Policy Studies in School Desegregation program applies the basic theories of social organization of schools to study the internal conditions of desegregated schools, the feasibility of alternative desegregation policies, and the relation of school desegregation with other educational issues such as housing and the desegregation of the labor force. The School Organization program is concerned with authority-contrast, institutional structure, reward systems, and other group processes in schools. It has produced a large-scale study of the effects of open schools, has developed Student Team Learning instructional processes for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school- and attendance monitoring. The School Processes and Career Development program is studying transitions from high school to post-secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcome. The Studies in Delinquency and School Environments program is examining the interactions of school environments, school experience, and individual characteristics in relation to in-school and later-life delinquency.

This report, prepared by the School Processes and Career Development program, examines the match between vocational aspirations and actual jobs. It compares men and women in order to learn how people may alter or change their aspirations and jobs during their career development.

Aspiration-Job Match: Age Trends in a Large
Nationally-Representative Sample of Young White Men

Abstract

Age trends in the match between vocational aspirations and actual jobs were studied in a nationally-representative sample of 3730 white men aged 16 to 28 who were interviewed yearly over a five-year period. As the youth aged, higher agreement between jobs and aspirations (classified according to Holland's typology) occurred. In addition, the distributions of both aspirations and actual jobs differed with age. Larger proportions of the older men were engaged in enterprising work, and the distribution of aspirations, which at age 16 diverged markedly from the distribution of jobs, resembled that distribution more closely by age 28. Implications for changing strategies of vocational counseling and research are discussed.

Acknowledgments

The advice of John L. Holland and Gary D. Gottfredson is gratefully acknowledged.

Aspiration-Job Match: Age Trends in a Large
Nationally-Representative Sample of Young White Men

Since Parsons (1909) counselors have attempted to aid young people in integrating occupational information and information about themselves in planning their careers. Until recently the tools available to counselors for providing occupational information have been unwieldy. To cope with the voluminous information about occupations, a number of occupational classification schemes have been developed to assist in organizing information. One such system is Holland's (1973) typology of persons and occupations. This scheme makes the parallel assessment of people and jobs easier and provides a set of tools for studying and displaying information about the job content of the economy, differences in the jobs people of different ages, race, or gender typically do, the ways these patterns of employment change across time, the development of career stability, the match between people's aspirations and their employment, and the importance of education for income attainment in different types of work (Gottfredson, Holland, & Gottfredson, 1975; G. Gottfredson, 1977; L. Gottfredson, 1977, in press a, in press b, in press c; Gottfredson & Daiger, 1977). The present paper reports additional information from a program of research designed to systematically examine careers using the Holland typology.

Recent research has examined the occupational constraints within which people attempt to fulfill their aspirations. Based on an examination of the occupational aspirations of youth and the distribution of occupations in the economy when both were classified according to the same typology, Gottfredson, Holland, and Gottfredson (1975) suggested that the distribution

of jobs in society limits the amount of congruence or match between people and jobs which is possible. Although they found the distribution of aspirations of young men similar to the distribution of jobs in the economy, youth aspired to some types of work in greater proportion than such work actually existed. For example, youth aspired to investigative and artistic jobs in greater proportion than men were employed in such work, and they aspired to clerical work in smaller proportion than such work was held by men. Dissimilarity between distributions of aspirations and jobs has often been taken as evidence of the lack of realism of vocational choices among young men (e.g., Trow, 1941). This dissimilarity does imply that many young people must either change their aspirations or else work at undesirable jobs.

This study extends earlier work by examining trends in aspiration-job congruence for white men aged 16 to 28 to learn how accommodation may take place. The following questions are explored. (a) How much does aspiration-job congruence increase with age? (b) How do the distributions of jobs and aspirations of young men vary by age? (c) What percentage of men change type of work or change category of aspiration from one year to the next, and how does categorical stability of aspiration develop with age?

Method

Data on a nationally-representative sample of 3730 young white men aged 14 to 24 in 1966 were obtained from the National Longitudinal Study of the Labor Market Experience of Young Men (Parnes *et al.*, 1970). The men were interviewed every year from 1966 to 1971, and the surveys provide data on both the aspirations and employment experiences for each of these years. Young men were not surveyed during the years they were in military service.

The analyses reported here are based on comparisons among different age

groups. Because of the small number of men in each cohort in 1968, the employment experiences of men of different ages were examined without regard to cohort, that is, without regard to which year it was that they were a particular age. For example, the jobs of men aged 18 in any year were compared to the jobs of men aged 20 in any year regardless of the survey year during which this information was obtained. This means that each man could be classified into as many as, but not more than, six age groups.

Data on aspirations and employment in two consecutive years were examined for different age groups. Occupational aspirations were obtained by asking the men each year what job they would like to have at age 30. Both aspirations and actual jobs held in the current year and the previous year were coded according to Holland's (1973) 6-category typology of people and jobs: realistic (R), investigative (I), artistic (A), social (S), enterprising (E), and conventional (C). Holland codes for the detailed 1960 census occupational titles used are shown in Gottfredson and Brown (1978).

The analyses involve three different groups of men. The broadest group of men examined is labelled "all men" and includes all men for whom both current employment status and current occupational aspirations are known. In order to assess job-aspiration congruence, a smaller second set of men (labelled "employed men" in several tables) was created from the first by excluding those men who were not currently employed. The third set of men (shown in Tables 2, 4, and 6) is yet smaller and includes only those men employed and expressing an aspiration in both the current and the previous year. This last set of men was used to examine and compare the categorical stability of aspirations and of jobs over a one-year period.

Job-aspiration congruence and the categorical stability of jobs and aspirations were assessed in parallel fashion. If jobs or aspirations fell

in the same Hollander category, they were classified as congruent or stable; if they fell in different categories, they were considered incongruent or not stable. The degree of congruence or stability within each of the seven age groups examined was summarized in two ways: by the percentage of men who were classified as congruent (percentage agreement) and by Cohen's (1960) kappa. Kappa is the ratio of observed proportionate agreement beyond chance to possible agreement beyond chance given the two marginal distributions across the six categories.

No significance levels are shown. The stratified sampling design used in the NLS makes the usual formulas for the standard errors of kappa inappropriate. The issues investigated all involve trends in the magnitude of kappa across ages. The regularity in progressions is believed to be more important than mere statistical significance with these very large samples.

Results

Age trends in the degree of congruence between category of job aspiration and category of actual job are examined first. Succeeding tables examine trends in the categorical stability of aspirations and of jobs over one-year periods. These tables also provide a profile of the types of jobs young men want and of the jobs they actually hold at different ages.

Changes in Aspiration-Job Congruence

Table 1 shows the degree of congruence of aspirations and actual jobs for different ages. It shows that the degree of congruence increases regularly and substantially from age 16 to age 28. The percentage of employed men who are employed in congruent jobs rises from 43% to 84%. When only agreement above that expected by chance is considered, that is when kappas are examined, the change is even more dramatic.

Insert Table 1 About Here

Table 1 does not show changes in congruence for the same set of men over early career because the seven age groups are composed of somewhat different sets of men. Table 2, however, shows increases in congruence over a one-year period for the same men. The table shows that aspiration-job congruence increases over the one-year interval for men of each age. In short, Tables 1 and 2 both suggest that job-aspiration congruence increases steadily among employed men and is quite high by the late twenties.

- - - - -
Insert Table 2 About Here
- - - - -

Stability of Type of Work Held

This increase in congruence can occur both because men are changing their jobs and because they are changing their aspirations. Tables 3 and 4 show changes in types of work held and Tables 5 and 6 show changes in aspirations.

The top panel of Table 3 shows the percentage of men who were employed and what type of work they held if they were employed; the lower panel excludes men not employed and shows the percentage of employed men who held each type of work. This table shows a steady change from age 16 to 28 in the types of jobs held by young men. With increasing age a greater proportion of men are found in investigative, social, and especially enterprising jobs. The distribution of work for men in their late twenties is similar to the distribution of jobs for all men reported by Gottfredson, Holland, and Gottfredson (1975), suggesting that by the late twenties the overall distribution of men across types of work has stabilized.

- - - - -
Insert Table 3 About Here
- - - - -

The distribution of men across the different types of work can change both because men who become employed at older ages tend to enter different types of work than do men becoming employed at an early age and also because men change jobs once employed. Table 4 shows the stability of the type of work held by the same men over a one-year interval, and it indicates that some of the changes in the distribution of jobs among young men are a result of some men changing types of work. The major net shifts occurring at all ages are shifts out of realistic work and shifts into enterprising work. Percentage agreement does not vary much with age; about 20% of men in all the age groups examined here change category of work from one year to the next. The kappas, however, increase from .44 to .74 and indicate that categorical stability of work is higher among the older men.

- - - - -
Insert Table 4 About Here
- - - - -

Stability of Aspirations

Table 5 shows the percentages of men in different age groups who aspire to each of the six categories of work. Percentages are shown separately for all men and for employed men, but the pattern is much the same for both groups. There is a large decrease in investigative aspirations--from a high of about 25% at age 16 to a low of about 10% at age 28. There are somewhat smaller absolute decreases in aspirations for artistic and social work. In contrast, there is over a two-fold increase in the proportion of men aspiring to enterprising work--from 12% to over 30%.

- - - - -
Insert Table 5 About Here
- - - - -

Comparing the distributions of aspirations (Table 5) to the distributions of actual jobs (Table 3) is particularly interesting. Both the aspira-

tions and the jobs of teenage men differ substantially from the jobs held by older men--and thus from the jobs the teenagers are likely to hold later in their careers. But by age 28 the distributions of both aspirations and jobs change, and they converge toward the distribution of jobs among older men. Although some men may be able to realize their aspirations, it appears that a fair number have adjusted their goals for age 30 to be more in line with what they realistically expect they will be doing at that age.

Table 6 provides some more clues about the kinds of changes in aspirations that occur and at what ages they occur. This table examines the one-year categorical stability of aspirations of men employed in both the current and previous year. Both the percentages of agreement and the kappas suggest that the stability of aspirations from year to year is much the same for employed men of all ages--though there may be a dip in stability in the early years after high school. This relatively high and constant level of stability in aspirations across different age groups of employed men contrasts with the pattern of initially low but increasing stability of actual jobs shown earlier (Table 4).

An examination of net changes in the aggregate distributions of aspirations in Table 6 shows that aggregate shifts are most pronounced among the younger men. The most striking change is between ages 16 and 20 and involves a halving of the proportion of men who want to have investigative (e.g. scientific or medical) jobs and a doubling of the percentage who want enterprising (e.g. sales and management) work. Table 5 showed the same pattern of changes when the broader groups of men were considered, but it suggests that the shifts occur somewhat later for men who are not yet employed. The large shift out of investigative and into enterprising work occurs during the college-going ages and is consistent with the science to non-science shift

among college majors found by Astin and Panos (1969). A decrease in aspirations for artistic work occurs among somewhat older men and is accompanied by the continued increase in interest in enterprising work. To summarize these results, 20 to 30% of men in all the age groups examined here change their type of aspiration over a one-year period, but their adjustment as a group to the constraints of the labor market--that is, to the realities of what jobs are most and least available--seems to occur by age 20 or 22.

Discussion

This report is based on longitudinal data for a large nationally-representative sample and provides the best evidence to date on age trends in aspiration-job match and on the one-year stability of aspirations and type of work held. The major limitation of the study is that it examines only one segment of the work force. Further work should examine the employment experiences of non-whites and of females, especially because it is plausible that these groups face more obstacles to fulfilling their aspirations. The experiences of older workers should also be examined, although this appears to be a less serious limitation because (a) congruence is already high by age 28 and (b) one- and five-year job stability has been shown to be relatively high beyond age 30 (G. Gottfredson, 1977; Byrne, 1975; Sommers & Eck, 1977). A second limitation has already been mentioned--cohort and age differences are confounded. It has been assumed here that cohort differences are minimal and that the differences discovered between the age groups reflect primarily developmental differences occurring with age. Nevertheless, different cohorts have probably been affected differently by the economic ups and downs of the last decade, so cohort differences must be explicitly examined in further research.

Aspiration-Job Congruence

Assuming that cohorts are similar, it appears that there are large shifts in both the types of jobs men hold and the jobs they want at different ages. Aspiration-job match increases dramatically with age, even above that predicted as potentially possible when the aspirations of youngsters are compared to the jobs actually likely to be available to them. If the aspirations of 16 year-olds (Table 5) are compared to the jobs held by 28 year-olds (Table 3), at most only 73% of men could find jobs congruent with these aspirations. Table 1 does show that only half of the men 20 or younger are in the type of work they would like to be in by age 30, but 84% of 28 year-olds say they are in congruent jobs. Although some proportion of men undoubtedly have been able to move into their preferred type of work, these results suggest that a minimum of 11% of the men have accommodated to labor market realities by adjusting their aspirations by age 30.

Whether or not men have changed their ambitions for later years of their careers is unknown, but they are likely to have done so because they have altered their earlier goals. Furthermore, they have altered their aspirations so that they conform much more closely to the jobs which have apparently been available to men in our society.

This adjustment is not surprising, of course. And from a societal perspective, it is desirable that workers be happy with the jobs they must fill--that they want the jobs they have or can get. But the massive shifts in aspirations raise some interesting questions. How difficult is it to change aspirations? Vocational theory implies that shifting aspirations involves a shift in one's basic conception of oneself. The analyses showed that the major net changes in aspirations are from investigative to enterprising work--which is a particularly difficult shift in terms of Holland's

theory--and they continue among men late into their twenties. Furthermore, who is best able to realize their aspirations? Early deciders or the vocationally mature? The most talented? The well-educated or the well-to-do? And when does this adjustment of aspirations most often occur? When making decisions about college before even taking a job? When taking one's first job? Or is it gradually coming to terms with or coming to like a job one once thought only a way-station to another destination?

Implications for Research and Practice

The results from this study are also a vivid reminder that the occupational world severely constrains the options of workers and that workers must in some way adjust to this reality. Although little research has examined the barriers or thwarting conditions with which workers must cope, theorists are beginning to stress the need for such research (e.g. Crites, 1976; Krumboltz, Mitchell, & Jones, 1978). But the results also remind us of another aspect of this reality that counselors and researchers are apt to forget if they deal primarily with the more advantaged sectors of society--that people must compete for the same limited supply and selection of jobs. A recent volume on career counseling (Whiteley & Resnikoff, 1978) illustrates this oversight. In that volume Crites (1978a) illustrates his comprehensive new model of career counseling with a case study of a high-ability college-bound high school student who is disturbed because she is undecided between social work and teaching. Nowhere in the entire volume are we faced with the considerably more poignant career problems which result from the restricted pool of jobs available in our society. For example, in 1970 about 2.5 million people were employed as janitors and maids, more people than were employed as either lawyers, doctors, accountants, or engineers (U.S. Bureau of the Census, 1973). And in that year 1.8 million people lost their jobs,

with another 2.3 million unemployed for other reasons (U.S. Department of Labor, 1976). Many other illustrations of the restricted nature of the job market could be provided, but the point is that to some degree getting good jobs is a zero-sum game (i.e. when some people win, others lose), and that many people must work in low-paying, low-prestige, low-security jobs if they are able to get jobs at all.

To more fully appreciate the constraining and competitive nature of the occupational world, vocational counseling and research must shift its emphasis from primarily analyzing individual clients and individual occupations to examining the broader social and economic environments that constrain career development and to analyzing the distributions of populations of individuals across environments. Three suggestions for analyzing social and occupational environments are provided below.

(1) Parallel classifications of people and jobs developed in the trait-factor tradition of counseling (e.g., Holland, 1973) are valuable tools for studying career development. Predictions about development (Holland & Gottfredson, 1976) originating from the modern differentialist theory of person-job match (i.e., from the modernized version of trait-factor theory) are supported in this study: congruence does increase with age as workers change the type of work they do or the type of work to which they aspire. But more important, the parallel classification of people and of occupations provides new insights into career development. Not only do individual men change jobs and aspirations, but these changes are highly patterned at the aggregate level. The distribution of jobs and of aspirations of entire age groups shift with age and converge toward the distributions of jobs typical of working older men. The direction of these shifts suggests that young men are responding to conditions of the labor market which have not

always been examined in studies of career development.

When Holland's typology is used to describe and classify job environments, it should generally be elaborated to include distinctions in job level or prestige because other research has shown the types to differ considerably in prestige and GED level (Gottfredson, in press b). Many of the men in this study who changed category of aspiration or job undoubtedly also changed level of aspiration or job. Incorporating level distinctions would also make research with Holland's scheme more comparable with status attainment and other sociological research (Blau & Duncan, 1967) which conceptualizes career development primarily as a competition among different socioeconomic groups for jobs high in the occupational prestige hierarchy.

(2) Vocational psychologists and counselors have devoted much effort to understanding what makes a wise career choice and how people come (or should come) to make choices before entering the labor market. In contrast, we know little about how people implement career strategies in a world which severely constrains their options, so we now need to look more closely at what actually happens to people after they become employed. Over two decades ago, Super (as quoted by Crites, 1978b) stressed the utility of knowledge about career patterns for career counseling and proposed research questions such as the following: What are the typical entry, intermediate, and regular adult occupations of persons from different socio-economic levels? What factors are related to the direction and rate of movement from one job or occupation to another? But research attacking such questions in the last two decades has been conducted primarily outside the discipline by sociologists interested in questions of the perpetuation of inequality across generations (e.g. Lipset & Bendix, 1959; Blau & Duncan, 1967; Sewell & Hauser, 1975) and this large literature has only occasionally made its way into the vocational literature

(cf. Vetter, 1978). Industrial and organizational psychology with its focus on designing work systems that promote performance and satisfaction also appears to be a good source of information about career development. This literature is better integrated into the vocational literature, largely through the writings of Wall (1976; see also Super and Hall, 1978). In the past, vocational counselors and researchers have turned toward other disciplines--particularly to psychotherapy--for insight into the structure of personality and personal adjustment. We now need to take similar advantage of disciplines such as sociology and economics for insight into the structure of the socioeconomic world with which individuals must cope.

(3) The types of opportunities and barriers in the environment which people face during career development should be catalogued and their distribution across different age and social groups systematically examined. Such information is needed for determining a fair or rational allocation of counseling resources--who needs counseling services the most, at what ages or stages in the life cycle, and of what type? We have a lot of information about the demands and reinforcers of individual occupations from trait-factor research in vocational psychology (e.g., Campbell, 1971), from job analyses (e.g., McCormick, Jeanneret, & Mecham, 1972), and from periodic surveys and censuses of the population (e.g., U.S. Bureau of the Census, 1973), although these data are often not organized in the terms most useful to counselors. We have little data by comparison on the availability and location of these different environments. For example, Holcomb and Anderson (1977) discovered that out of 522 guidance studies between 1971 and 1975, 41 dealt with career information and only 2 of those with job availability. Other constraints which are acknowledged only implicitly in current discussions of counseling should also be catalogued. For example, societal norms about what is appropriate career behavior for different ages or sexes are probably quite strong. Such pressures are

implicitly acknowledged in discussions of indecision and of counselors' strategies for reducing the anxiety or guilt of being undecided (e.g., Crites, 1978a) --why would clients feel discomfort of guilt if they were not violating some expectation for their career behavior? Parent-child conflicts in occupational aspirations for the child are also cited as frequent problems. Relevant learning environments--an important focus of Krumboltz's social learning theory of career selection (Krumboltz, Mitchell, & Jones, 1978)--can be expected to differ systematically for the sexes and different ethnic groups. Such differences in learning environments are important partly because they may reinforce race and sex differences in employment. For example, Gottfredson (1978) has suggested that exposure to a different pattern of occupational environments is partly responsible for black youngsters adjusting their occupational aspirations towards different families of work than do whites when the youngsters abandon initial unrealistic preferences for professional work. The distribution of needs for counseling services should then be compared with the actual distribution of services. It is possible that counseling resources are most available to the most advantaged populations in our society (e.g., more available to college students than to non-college bound youngsters) and thus to those who may need it least in the competition for jobs.

References

- Astin, A. W., & Panos, R. J. The educational and vocational development of college students. Washington, D.C.: American Council on Education, 1969.
- Blau, P. M., & Duncan, O. D. The American occupational structure. New York: Wiley, 1967.
- Byrne, J. J. Occupational mobility of workers. Monthly Labor Review, 1975, 98, 53-59.
- Campbell, D. Handbook for the Strong Vocational Interest Blank. Stanford: Stanford University Press, 1971.
- Cohen, J. C. A coefficient of agreement for nominal scales. Educational and Psychological Measurement, 1960, 20, 37-46.
- Crites, J. O. A comprehensive model of career development in early adulthood. Journal of Vocational Behavior, 1976, 9, 105-118.
- Crites, J. O. Career counseling: A comprehensive approach. In J. M. Whiteley & A. Resnikoff (Eds.), Career Counseling. Monterey, California: Brooks/Cole, 1978. (a)
- Crites, J. O. Career counseling: A review of major approaches. In J. M. Whiteley & A. Resnikoff (Eds.), Career Counseling. Monterey, California: Brooks/Cole, 1978. (b)
- Gottfredson, G. D. Career stability and redirection in adulthood. Journal of Applied Psychology, 1977, 62, 436-445.
- Gottfredson, G. D., & Daiger, D. C. Using a classification of occupations to describe age, sex, and time differences in employment patterns. Journal of Vocational Behavior, 1977, 10, 121-138.
- Gottfredson, G. D., Holland, J. L., & Gottfredson, L. S. The relation of vocational aspirations and assessments to employment reality. Journal of Vocational Behavior, 1975, 7, 135-148.

- Gottfredson, L. S. A multiple-labor market model of occupational achievement. Report No. 225. Baltimore, MD: Johns Hopkins University, Center for Social Organization of Schools, 1977.
- Gottfredson, L. S. Race and sex differences in occupational aspirations: Their development and consequences for occupational segregation. Report No. 254. Baltimore: Center for Social Organization of Schools, Johns Hopkins University, 1978.
- Gottfredson, L. S. An analytical description of employment according to race, sex, prestige, and Holland type of work. Journal of Vocational Behavior, in press. (a)
- Gottfredson, L. S. The construct validity of Holland's occupational classification in terms of prestige, census, Department of Labor and other classification systems. Journal of Applied Psychology, in press. (b)
- Gottfredson, L. S. Providing Black youth more access to enterprising work. Vocational Guidance Quarterly, in press. (c)
- Gottfredson, L. S., & Brown, V. C. Holland codes for the 1960 and 1970 censuses: Detailed occupational titles. JSAS Catalog of Selected Documents in Psychology, 1978, 8, 22. (Ms. No. 1660)
- Hall, D. T. Careers in organizations. Pacific Palisades, California: Good- & year Publishing Company, 1976.
- Holcomb, W. R., & Anderson, W. P. Vocational guidance research: A five-year overview. Journal of Vocational Behavior, 1977, 10, 341-346.
- Holland, J. L. Making vocational choices: A theory of careers. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- Holland, J. L., & Gottfredson, G. D. Using a typology of persons and environments to explain careers: Some extensions and clarifications. Counseling Psychologist, 1976, 6, 20-29.

- Krumboltz, J. D., Mitchell, A. M., & Jones, G. E. A social learning theory of career selection. In J. M. Whiteley & A. Resnikoff (Eds.), Career Counseling. Monterey, California: Brooks/Cole, 1978.
- Lipset, S. M., & Bendix, R. Social mobility in industrial societies. Berkeley: University of California Press, 1959.
- McCormick, E. J., Jeanneret, P. R., & Mecham, R. C. A study of job characteristics and job dimensions as based on the Position Analysis Questionnaire (PAQ). Journal of Applied Psychology Monograph, 1972, 56, 347-368.
- Parnes, H. S., Miljis, R. C., Spitz, R. A. & Associates. Career thresholds: A longitudinal study of the educational and labor market experiences of male youth, Vol. 1. (U.S. Department of Labor Monograph No. 16.) Washington, D.C.: U.S. Government Printing Office, 1970.
- Parsons, F. Choosing a vocation. Boston: Houghton-Mifflin, 1909.
- Sewell, W. H., & Hauser, R. M. Education, occupation, and earnings. New York: Academic Press, 1975.
- Sommers, D., & Eck, A. Occupational mobility in the American labor force. Monthly Labor Review, 1977.
- Super, D. E., & Hall, D. T. Career development: Exploration and planning. Annual Review of Psychology, 1978, 29, 333-372.
- Trow, W. C. Phantasy and vocational choice. Occupations, 1941, 20, 89-93.
- U.S. Bureau of the Census. Census of population: 1970 subject reports, Final report PC(2)-7A occupational characteristics. Washington, D.C.: U.S. Government Printing Office, 1973.
- U.S. Department of Labor. Employment and training report of the President. Washington, D.C.: U.S. Government Printing Office, 1976.

Vetter, L. Reactions to Crites' review of the major approaches to career counseling. In J. M. Whiteley & A. Resnikoff (Eds.), Career Counseling. Monterey, California: Brooks/Cole, 1978.

Whiteley, J. M. & Resnikoff, A. (Eds.). Career counseling. Monterey, California: Brooks/Cole, 1978.

Table 1
Congruence of Aspirations and Actual Jobs

Age	Aspiration - Job Congruence		(N)
	% Agreement	Kappa	
16	42.5	.11	(348)
18	49.2	.20	(744)
20	53.4	.32	(862)
22	60.3	.44	(865)
24	67.8	.55	(904)
26	75.4	.65	(805)
28	84.0	.77	(432)

NOTE: Table includes all men employed and expressing an aspiration in the current year.

Table 2
 Congruence of Aspirations and Actual Jobs
 in Two Consecutive Years for Men Employed Both Years

Age	Year	Aspiration - Job Congruence		(N)
		% Agreement	Kappa	
16	previous	36.9	.06	(160)
	current	46.2	.14	
18	previous	47.4	.13	(454)
	current	52.0	.22	
20	previous	53.9	.28	(601)
	current	55.7	.33	
22	previous	57.4	.40	(646)
	current	63.6	.48	
24	previous	68.6	.56	(741)
	current	69.1	.56	
26	previous	71.6	.60	(676)
	current	76.8	.67	
28	previous	81.8	.74	(395)
	current	83.8	.77	

NOTE: Table includes only men employed and expressing an aspiration in both the previous and current years.

Table 3
 Category of Work Held by All Men and by
 Employed Men Only (Percent)

Age	Category of Work						Not employed	(N)
	R	I	A	S	E	C		
All Men								
16	41.5	0.1	1.3	0.6	5.6	1.2	49.6	(691)
18	47.7	1.1	1.6	1.6	6.6	3.7	37.7	(1195)
20	48.2	3.0	2.1	2.7	10.8	5.6	27.4	(1188)
22	49.6	5.4	2.3	8.3	13.7	6.5	14.3	(1009)
24	46.5	8.3	1.5	8.4	21.2	7.0	7.0	(972)
26	48.8	8.2	1.6	9.1	21.9	6.7	3.7	(836)
28	45.7	8.8	2.0	10.0	25.8	5.4	2.3	(442)
Employed Men Only								
16	82.5	0.3	2.6	1.1	11.2	2.3		(348)
18	76.6	1.7	2.6	2.6	10.6	5.9		(744)
20	66.5	4.2	2.9	3.7	15.0	7.8		(862)
22	57.8	6.2	2.6	9.7	16.0	7.6		(865)
24	50.0	9.0	1.6	9.1	22.8	7.5		(904)
26	50.7	8.6	1.6	9.4	22.7	7.0		(805)
28	46.8	9.0	2.1	10.2	26.4	5.6		(432)

NOTE: Table includes only men expressing an aspiration in the current year.

Table 4

Category and Stability of Work Held in Two Consecutive
Years by Men Employed both Years (Percent)

Age	Year	Category of Work						Categorical Stability of Job		(N)
		R	I	A	S	E	C	% Agreement	Kappa	
16	previous	76.9	0.0	3.8	0.6	12.5	6.3	78.8	.44	(160)
	current	78.1	0.0	3.8	1.3	12.5	4.4			
18	previous	77.8	1.1	2.9	1.8	10.6	5.9	78.2	.43	(454)
	current	77.3	1.5	2.2	2.6	11.0	5.3			
20	previous	74.0	2.2	2.5	2.2	12.3	6.8	75.4	.47	(601)
	current	68.6	3.8	2.3	3.7	14.0	7.7			
22	previous	63.0	6.0	2.8	6.8	13.2	8.2	76.6	.60	(646)
	current	59.1	5.9	2.9	8.5	15.9	7.6			
24	previous	52.4	8.2	3.2	10.3	18.8	7.2	82.3	.74	(741)
	current	51.3	8.4	1.5	9.3	22.5	7.0			
26	previous	49.4	8.1	0.9	10.2	22.2	9.2	81.4	.73	(676)
	current	49.1	7.8	1.3	9.6	24.4	7.7			
28	previous	49.1	8.4	1.5	10.4	24.8	5.8	82.0	.74	(395)
	current	46.8	8.9	2.3	10.6	25.8	5.6			

NOTE: Table includes only men employed and expressing an aspiration in both the previous and current years.

Table 5

Category of Aspirations
All Men and Employed Men (Percent)

Age	Aspirations for Category of Work						(N)
	R	I	A	S	E	C	
All Men							
16	36.0	26.6	7.4	14.2	12.4	3.	(691)
18	34.4	17.4	9.0	16.9	17.2	5.1	(1195)
20	32.7	16.1	6.8	15.0	25.3	4.0	(1188)
22	35.2	12.2	5.8	15.6	26.6	4.6	(1009)
24	34.2	11.9	2.6	11.9	33.8	5.4	(972)
26	40.0	8.2	2.0	11.5	33.0	5.3	(836)
28	42.8	10.4	2.0	10.6	29.9	4.3	(442)
Employed Men Only							
16	41.1	24.7	5.7	12.9	11.5	4.0	(348)
18	43.5	13.2	8.5	14.4	16.3	4.2	(744)
20	39.9	12.3	6.8	12.6	24.6	3.7	(862)
22	37.4	10.2	5.5	14.6	27.4	4.8	(865)
24	35.8	10.6	2.4	11.4	34.6	5.1	(904)
26	40.4	7.7	2.0	11.3	33.2	5.5	(805)
28	42.6	10.6	1.8	10.9	29.6	4.4	(432)

NOTE: Table includes only men expressing an aspiration in the current year.

Table 6

Category and Stability of Aspirations in
Two Consecutive Years

Age	Year	Category of Aspirations						Categorical Stability of Aspirations		(N)
		R	I	A	S	E	C	% Agreement	Kappa	
16	previous	40.0	27.5	7.5	11.3	11.3	2.5	72.5	.62	(160)
	current	45.6	23.1	7.5	11.3	9.4	3.1			
18	previous	45.6	17.0	6.4	15.0	12.6	3.5	67.8	.55	(454)
	current	46.5	13.2	7.3	14.3	15.9	2.9			
20	previous	44.4	10.6	7.5	11.6	20.6	5.2	69.9	.59	(601)
	current	43.1	11.6	7.5	10.8	23.3	3.7			
22	previous	38.2	12.2	6.0	13.9	26.2	3.4	71.5	.62	(646)
	current	40.4	10.1	5.3	13.3	27.1	3.9			
24	previous	39.0	10.7	2.7	12.0	30.5	5.1	73.4	.63	(741)
	current	36.7	10.4	2.3	11.5	34.7	4.5			
26	previous	37.6	9.5	2.2	11.4	33.0	6.4	75.6	.66	(676)
	current	39.5	7.2	1.9	11.5	33.7	6.1			
28	previous	40.8	7.6	1.5	11.1	33.9	5.1	81.0	.73	(395)
	current	42.0	9.9	2.0	11.1	30.4	4.6			

NOTE: Table includes only men employed and expressing an aspiration in both the current and previous years.